# STORM WATER POLLUTION PREVENTION PLAN

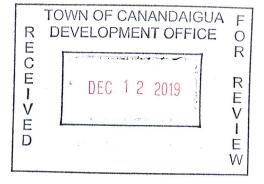
for

Wegman Residence 4885 County Road 16 Canandaigua, New York

prepared by

Venezia and Associates 5120 Laura Lane Canandaigua, NY 14424

December 10, 2019



## STORM WATER POLLUTION PREVENTION PLAN

### 4885 County Road 16 Canandaigua, New York

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### **Attachments**

SPDES Permit	Notice of Intent for Storm Water Discharges Associated with Construction Activity Under
	an SPDES General Permit for Construction Activity GP-0-15-002.
Specifications	Sedimentation and Erosion Control Specification
Operations &	Stormwater System Operations and Maintenance Plan
Maintenance Plan	
SWPPP Plan	"Site Drainage and Erosion Control Plan" and "Site Drainage and Erosion Control
	Details" drawings dated 12/10/19, prepared by Venezia and Associates.

### **OVERVIEW**

In compliance with the provisions of the Clean Water Act and its amendments, operators of large and small construction activities must apply for coverage under the terms of the National Pollutant Discharge Elimination System (NPDES) general permit or by a state permit program. The U. S. Environmental Protection Agency (EPA) has issued the Construction General Permit (CGP) to authorize the discharge of stormwater associated with construction activities under the NPDES. New York State's SPDES (State Pollutant Discharge Elimination System) is a NPDES-approved program with permits issued in accordance with the Environmental Conservation Law (ECL). The CGP authorizes the stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter surface waters of the United States or a municipal storm system leading to surface waters of the United States. The discharges are subject to the conditions set forth in the CGP.

The goal of the CGP is to reduce or eliminate stormwater pollution from construction activities by requiring the planning and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to protect the water quality of receiving surface water bodies. The SWPPP identifies potential sources of pollution from the construction site that may affect the quality of storm water discharges, describes practices to be used to reduce such pollutants, and assures compliance with the terms and conditions of the CGP. The SWPPP is a comprehensive guide, which when followed, will result in the placement of erosion and pollution prevention measures, maintenance and monitoring of the inplace measures, and means to modify the plan.

In order to obtain coverage under the CGP for authorized stormwater discharges, the operator must prepare and submit a *Notice of Intent (NOI) for Storm Water discharges associated with Construction Activity under a SPDES General Permit.* A SWPPP must be prepared prior to the submission of an NOI. A copy of the SWPPP must be kept at the project site from project initiation to the date of final stabilization. Upon final stabilization of the site, a Notice of Termination must be submitted to the State of New York. A notice of the permit and SWPPP must be posted conspicuously near the entrance to the site.

In the State of New York, the Department of Environmental Conservation is the SPDES permitting authority.

## STORM WATER POLLUTION PREVENTION PLAN

4885 County Road 16 Canandaigua, New York

Project Owner:

Daniel R. Wegman

Operator/General Contractor:

Wegmans/Ketmar Construction

Civil Engineer:

Venezia and Associates

### SITE DESCRIPTION

### **Description of the Project**

The project involves the construction of a new driveway, new tennis court and landscape improvements, at 4885 County Road 16/West Lake Road in the Town of Canandaigua. The new development will have a footprint of approximately 1.1 acres. Immediately adjacent to West Lake Road the site soils are mapped as Ovid Silty Clay Loams (Hydrologic Group B) while the majority of the site fronting Canandaigua Lake are mapped as Lansing Loam soils (Hydrologic Group C/D) as per the NRCS Soil Survey last updated September 16, 2019. Soil testing on the site has generally confirmed the NRCS mapping. We also note that due to previous development on the site some areas have relatively shallow depths to bedrock.

### Site Hydrology

The existing site slopes towards Canandaigua Lake which runs the entire length of the eastern edge of the property. The proposed project intends to maintain the existing drainage pattern while incorporating stormwater quality and quantity management systems including a driveway drainage collection swale, area drain collection points, rain gardens and a subsurface retention/infiltration area beneath the proposed tennis court.

Due to the fact that the project is a Single-Family home <u>not</u> located in one of the watershed listed in Appendix C or <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E of the NYS DEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-15-002. Construction activities require the preparation of a Stormwater Pollution Prevention Plan that only include Erosion and Sediment Controls. We also note that a stormwater sizing report has been prepared and may be referenced for the anticipated stormwater improvements outside of the requirements for this Construction General Permit.

### **SEQUENCE OF MAJOR ACTIVITIES**

The general order of activities shall be as follows:

- 1. ALL EROSION CONTROL MEASURES INCLUDING PERIMETER EROSION CONTROL AND SEDIMENTATION DEVICES, STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION DEVICES, AND DESIGNATED MATERIAL HOLDING AND STAGING AREAS SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
- 2. REMOVE ALL TREES THAT ARE SCHEDULED FOR REMOVAL DOWN TO STUMP. STUMP REMOVAL SHALL TAKE PLACE DURING SITE CONSTRUCTION PHASE.

- 3. BEGIN GENERAL CONSTRUCTION ACTIVITIES FOR BUILDING AND SITE IMPROVEMENTS.
- 4. CONSTRUCT NEW BUILDING ADDITION, TERRACE, AND NEW GARAGE.
- 5. CONSTRUCT ENHANCED AUTOCOURT, PATHWAYS, AND MISCELLANEOUS SITE IMPROVEMENTS IN THE UPPER AREA AND MAIN AREAS.
- 6. COMPLETE ALL PLANTING AND SEEDING WORK.
- 7. FINALIZE ALL WORK INCLUDING BUILDING, SITE WORK AND LANDSCAPE AND PLANTING WORK. PERMANENTLY STABILIZE ALL AREAS ON SITE.
- 8. AFTER SITE IS STABILIZED, ALL EROSION CONTROL MEASURES CAN BE REMOVED AND MONITORING OF THE SITE CAN CEASE ONLY AFTER APPROVAL HAVE BEEN GRANTED BY THE TOWN OF CANANDAIGUA AND/OR THEIR REPRESENTATIVE.
- 9. RAIN GARDENS SHALL NOT BE INSTALLED UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE ACHIEVED FINAL STABILIZATION.

### **CONTROLS**

In accordance with the Contract Documents, erosion and sedimentation controls will be incorporated during all phases of the project. Temporary stormwater controls will be implemented throughout the course of the project.

The sections of the project specifications that govern erosion and sediment controls are included at the end of this report.

### **Erosion and Sedimentation Controls:**

### **Temporary Controls**

- 1. Contractor shall minimize site disturbance as much as possible during the duration of the project.
- 2. All areas disturbed by construction that will not see any further disturbance or construction activity will be stabilized no later than 7 days from the last construction activity in the area. Landscaped areas that are disturbed will stabilized by seeding. Paved areas that are disturbed will be stabilized with crushed stone.
- 3. Inlet protection to trap sediment and debris will be placed in catch basins and area drains.

### Permanent Controls

When the project is completed, all disturbed areas will be permanently stabilized. The areas disturbed will be replaced in kind as shown in the Contract Documents (paved areas will be stabilized with bituminous concrete while landscaped areas will be stabilized by placing 4" of loam and hydroseeding).

### Stormwater Management During Construction:

Stormwater runoff will be carefully managed during construction to limit the potential for sediment loss from the site. Prior to beginning any excavation work on the site, the contractor shall construct a temporary sediment basin capable of capturing the anticipated runoff from the disturbed site. The temporary sediment basin is proposed to be located on the downstream side of the project, between the proposed tennis court and the existing residence, where a relatively level area is available immediately adjacent to the planned construction zone. The existing driveway at 4885 will be utilized for construction

access and will be reconfigured during the construction of the tennis court. Stabilization of the driveway sections being reconstructed will include establishment of permanent vegetation on all exposed surfaces including jute mesh erosion protection on slopes and the planting of mature trees and shrubs as depicted on the Landscape Architecture drawings.

### OTHER CONTROLS

### Waste Disposal:

### Waste Material

- 1. Construction waste will be collected in dumpsters and emptied at least once per week and more often as necessary. Dumpsters will not be located in disturbed areas.
- 2. All waste will be removed from the site and legally disposed of.
- 3. No waste disposal will occur onsite.

### Hazardous Waste

- 1. All hazardous materials used onsite will be disposed of in a manner specified by the manufacturer of the material and as required by local, state, and Federal regulation.
- 2. Each respective contractor and subcontractor will instruct site personnel using these materials in these practices.

### Offsite Vehicle Tracking:

- 1. Surrounding streets in the vicinity of the site shall be inspected daily and swept as required during excavation activities.
- 2. A stabilized construction entrance will be provided at the vehicle entrances to reduce the tracking of sediments by site vehicles.

### **Dust Control**:

- 1. The contractor shall employ dust control measures to minimize the creation of airborne dust during the entire construction process.
- 2. Water will be used as required for dust control.
- 3. Calcium chloride may be used for dust control only in areas not designated to receive loam and seed and/or landscaping.

### MAINTENANCE AND INSPECTION PROCEDURES

- 1. All erosion control measures will be inspected at a minimum of once a week. The person responsible for the Contractor's operations onsite shall conduct the said inspections.
- 2. A monthly inspection report shall be filed in the Contractor's main offices and in the job site trailer.
- 3. All measures will be inspected after rainfall events of more than one-half inch (0.5") of precipitation.
- 4. All measures will be maintained in good working order and repairs will be made to measures within 24 hours of being reported.

- 5. Built-up sediment will be removed from the silt fences when it has reached one-third the height of the fence.
- 6. Catch basin and Area Drain inlets will be maintained with silt sacks or filter fabric to minimize sediment transport through the drainage system.
- 7. Silt fence and hay bale lines will be inspected to ensure these measures are intact. Hay bale lines will be securely staked in an unbroken line, and silt fences will be securely keyed into the ground and supported on stakes.
- 8. Permanent seeding will be inspected for washout and health of cover. Washouts will be repaired within 24 hours of being reported. Bare spots will be re-seeded.

### NON-STORMWATER DISCHARGES

The following non-storm water discharges from the site may occur during the construction period: water from water line flushing if required.

### INVENTORY FOR POLLUTION PREVENTION PLAN

The following material may be present onsite: concrete, detergents, paints and stains (enamel and latex), masonry, petroleum-based products, cleaning solvents, and fertilizers.

### SPILL PREVENTION

### Housekeeping Measures:

- 1. The Contractor's representative will inspect daily for proper use, storage, and cleanup of material used on the job site.
- 2. Store only enough material onsite required for that job as to satisfy current construction needs.
- 3. Store required materials in tightly lidded containers under cover.
- 4. Store materials in original containers with clearly legible labels.
- 5. Separate and store materials apart from each other.
- 6. Do not mix materials unless specifically in accordance with manufacturers' recommendations.
- 7. Use all products from a container before disposing of the container.
- 8. Follow manufacturers' instructions for handling, storage, and disposing of all materials.

### Hazardous Materials:

- 1. Keep products in their original containers.
- 2. Original container labels should be clearly visible.
- 3. Material safety data sheets will be kept onsite and be available.
- 4. Follow all state, local, and Federal regulations regarding the handling, use, storage, and disposal of hazardous material.

### Petroleum Products:

- 1. Only skilled personnel in a designated area will perform fueling of vehicles onsite.
- 2. Vehicles used onsite will be monitored for fuel and oil leaks.
- 3. Vehicles used onsite will be maintained in good working order.
- 4. Asphalt substances will be applied in accordance with manufacturers' recommendations.
- 5. The use of petroleum products as a release agent for asphalt transport trucks is prohibited.
- 6. Vehicle fueling will only be done in vehicle fueling area indicated.

### Fertilizers:

- 1. Fertilizers will be used at the application rates called for in the specifications for the project.
- 2. Once applied, fertilizer will be worked into the soil to minimize wash off from irrigation and stormwater.
- 3. Fertilizer will be stored under cover.
- 4. The contents of partially used fertilizer bags will be transferred to resealable, watertight containers clearly labeled with their contents.

### Paints:

- 1. All paint containers will be tightly sealed when not in use.
- 2. Remove excess paint in original labeled containers from the jobsite.
- 3. Paint will not be disposed of onsite. Remove excess paint material from the site and legally dispose of.

### Concrete Trucks:

1. All concrete trucks will wash down in the designated area. Accumulated concrete shall be removed from the site and legally disposed off-site as required.

### **Spill Control Practices:**

- 1. Manufacturers' recommended spill control methods will be posted and site personnel will be made aware of the requirements.
- 2. Cleanup supplies will be kept onsite in a materials storage area. This equipment will include: goggles, brooms, dustpans, mops, rags, gloves, oil absorbent, sawdust, plastic and metal trash cans, and other materials and supplies specifically designated for cleanup.
- 3. All spills will be immediately cleaned up after discovery.
- 4. The spill area will be well ventilated.
- 5. Cleanup personnel will wear suitable protective clothing.
- 6. Spills of toxic and/or hazardous material will be reported to state, local, and Federal authorities, as required by law. Spills shall also be reported immediately to the owner.
- 7. A spill incident report will be filed detailing the amount and extent of the spill, material(s) involved, and effectiveness of the cleanup. This report will be on file at the contractor's office, as well as kept onsite in the field office. A copy shall also be filed with the HCC.
- 8. The Contractor will designate someone onsite that will serve as the Spill Cleanup Coordinator. At least two other personnel will be designated as alternate spill coordinators. All spill control personnel will be trained in spill prevention, control, and cleanup. The names of the responsible personnel will be posted at the jobsite office of the Contractor.

December 10, 2019

### Owner/Operator Certification

The owner/operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.

The owner or operator shall have each of the contractors and subcontractors identified, sign a copy of the following certification statement below before they commence any construction activity. The owner/operator shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the construction site.

Site Location: 4885 County Road 16/West Lake Road -- Canandaigua, NY

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

	Name a	and Title		Date
			Company Address:	
	Company Representing		Phone:	
Items f	for SWP	PP elements certifier is	responsible (check all tha	t apply):
		Installation and Maint	enance of Erosion and Sed	iment Control Practices
		Repair/Replacement o	f Erosion and Sediment Co	ontrol Practices
		Inspection of Erosion	and Sediment Control Prac	ctices/ SWPPP Compliance
		Construction of Post-C	Construction Stormwater M	Sanagement Practices

## SWPPP Inspection Checklist

Wegman Residence – SWPPP Inspection Checklist						
Date of inspection		Weather Cond	itions:	Inspecte	d By:	
Item	Acceptable	Not Acceptable	Comment		P.I.C. of repair	

## Log of Changes to the SWPPP

SWPP Change Reason For Change Change By:	We	gman Residence - Log of SWPPP Changes	
SWPP Change Reason For Change Change By:	CIVIDAD CI	D D 01	-
	SWPPP Change	Reason For Change	Change By:
	,	,	

Log of Corrective Action

Wegman	Residence - C	orrective Action Log	
	i costucii c	offective Action Log	
Action requested	Responsible Party	Re-Inspection Date	Additional Work Required
		,	
	Action requested	Action requested Responsible Party  Action requested Responsible Party	Action requested Responsible Re-Inspection Date Party  Action requested Responsible Re-Inspection Date Party  Action requested Responsible Re-Inspection Date Party



### Construction Stormwater Observation Report

Project Name & Location			on				No			
				Time:				Observations By:		
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Cont	ractor:			Wetlan		Storm	THE RESERVE OF THE PERSON NAMED IN			
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CI.			_			***************************************	Date.		T	T
			Building Const.		Own				누片	┼┼┤
Temp	o. Stabi	lization 🔲	Utility Installation 🗌	Co	ontra	actor				
Roug	h Gradi	ing 🔲	Final Stabilization 🗌	Mi	unici	pality				
No Co	onstruc	tion Activit	EY 🔲	Town	Eng	ineering				
Inspe	ction F	requency:	Semiweekly U	Veekly		/lonthly	Other			
	Checl		T /					A CONTRACTOR OF THE PARTY OF TH		
Yes	No	N/A	1						Comm	nents:
			Is there evidence of	turbidity i	n th	e receiving	waters, or o	causing a		
			substantial vis	sible cont	rast	to natural o	conditions?			
			Is evidence of so	Is evidence of sedimentation in the receiving waters?						
			Adjoining properties a	nd down	strea	ım waterw	ays protecte	ed from		
			erosion and sedimer	THE RESERVE AND ADDRESS OF THE PARTY OF THE	THE PERSON NAMED IN	THE RESIDENCE AND PERSONS ASSESSED.	THE PROPERTY OF THE PARTY OF TH	THE RESIDENCE PROPERTY AND ADDRESS OF THE PARTY AND ADDRESS OF THE PART		
П				Have all erosion control measures been installed/constructed per						
	bread		Gradi	ng & Eros	sion	Control Pla	n?	seinus et enteraturat recretamina estado	MANAGE AND THE PROPERTY OF THE PARTY OF THE	
			Are check dams in good condition?							
			Has accumulated sediment been removed from check dams?							
П	П	П	Do all operational sto	Do all operational storm inlets have adequate inlet protection?						
		lamani passang								
		Ш	Are perimeter e	rosion co	ntrol	measures	functioning	?		
П	П		Have sediment basin				cted accord	ing to		
	Land .	hamad		approv				.10	ENDERSON AND ADDRESS AND ADDRE	
			Have the stabilized				been installe	ea &		
	promote	- Annual - A	Have public readways a	main		AND DESCRIPTION OF THE PERSON	kont from	of mud &	MENNAND PRODUCTION OF THE PERSON OF THE PERS	
Ш			Have public roadways and site access roads been kept free of mud & debris?							¥
		П	Is	dust con	trol	needed?				
				AND DESCRIPTION OF THE PARTY OF			en 38 es 2000 (100 en 100 e		Name of the Owner	
	Ш		Is Construction site							
			Are soil stabilization mea		ing ir plan		d in a timel	y manner		
			Are finished cu				stabilized?			
			Is the site ac	lequately	stab	ilized at th	is time ?		Manual source response and the Park	

	Checkli	ist:		
Yes	No	N/A		Comments:
			Have temporary measures that are no longer needed been removed?	
			Are areas where soil disturbances have ceased been stabilized within 7 days of last disturbance?	
			Are soil stockpiles in appropriate locations and covered, mulched & vegetated?	
			Are additional temporary erosion control measures needed?	
			Have all permanent stormwater management facilities been installed/constructed?	
			Has construction sequences been followed?	
			Are erosion control measures in need of repair, replacement or enhancement?	
			Have all deficiencies from previous reports been addressed?	
	attache Notes:	d sketch (	if necessary) SWPP Modification (see attached) See Atta	ached Photos
	VEN LAND SURVE	VEZIA EYORS AND CIVIL ENG	P.E. R.L.A. CPESC SWT	Date

This Record is intended to provide compliance with the provisions of Part II C.3a of the NYS DEC SPDES General Permit for Stormwater Discharges from Constructions Activities

NOTICE OF INTENT FOR STORMWATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION ACTIVITY
UNDER A SPDES GENERAL PERMIT
FOR CONSTRUCTION ACTIVITY
GP-0-15-002



### NOTICE OF INTENT



### New York State Department of Environmental Conservation

### Division of Water 625 Broadway, 4th Floor Albany, New York 12233-3505

NYR					
	(for	DEC	1150	on 1	W)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002 All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

# -IMPORTANTRETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator (Company Name/Private Owner Name/Municipality Name)  Owner/Operator Contact Person Last Name (NOT CONSULTANT)  W E G M A N  Owner/Operator Contact Person First Name  D A N I E L  Owner/Operator Mailing Address  4 8 8 5 W E S T L A K E R O A D  City  C A N A N D A I G U A  State  N Y  Phone (Owner/Operator)  Fax (Owner/Operator)  Fax (Owner/Operator)  Fax (Owner/Operator)  Fax (Owner/Operator)  For TAX ID  (not required for individuals)	Owner/Operator Information
W E G M A N  Owner/Operator Contact Person First Name  D A N I E L  Owner/Operator Mailing Address  4 8 8 5 W E S T L A K E R O A D  City C A N A N D A I G U A  State N Y  Phone (Owner/Operator)  Fax (Owner/Operator)  Email (Owner/Operator)  Fax (Owner/Operator)  Fax (Owner/Operator)  Fax (Owner/Operator)	Owner/Operator (Company Name/Private Owner Name/Municipality Name)
W E G M A N  Owner/Operator Contact Person First Name  D A N I E L  Owner/Operator Mailing Address  4 8 8 5 W E S T L A K E R O A D  City C A N A N D A I G U A  State N Y  Phone (Owner/Operator)  Fax (Owner/Operator)  Email (Owner/Operator)  Fax (Owner/Operator)  Fax (Owner/Operator)  Fax (Owner/Operator)	
DANTEL           Owner/Operator Mailing Address           4885 WEST LAKEROAD           City           CANANDAIGUA           State           NY           Phone (Owner/Operator)           Fax (Owner/Operator)           Email (Owner/Operator)   FED TAX ID	
Owner/Operator Mailing Address  4 8 8 5 W E S T L A K E R O A D  City C A N A N D A I G U A  State	
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C A N A N D A I G U A  State     Zip     N Y	
N Y	
Email (Owner/Operator)  FED TAX ID	
FED TAX ID	
	Email (Owner/Operator)

Project Site Informa	ation
Project/Site Name WEGMAN RESIDENCE	
Street Address (NOT P.O. BOX)  4 8 8 5 W E S T L A K E R O A D	
Side of Street ○ North ○ South ● East ○ West	
City/Town/Village (THAT ISSUES BUILDING PERMIT) TOWNOFCANNANDAIGUA	
State         Zip         County           N Y         1 4 4 2 4 -         O N T A R I O	DEC Region 8
Name of Nearest Cross Street  DEUELROAD	
Distance to Nearest Cross Street (Feet)	Project In Relation to Cross Street  O North South O East O West
Tax Map Numbers Section-Block-Parcel  1 4 0 . 1 8 - 1 - 1 6 . 0	Tax Map Numbers  1 4 0 . 1 8 - 1 - 1 6 . 0

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you  ${\tt must}$  go to the NYSDEC Stormwater Interactive Map on the DEC website at:

### www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X	Coo	rdi	nate	es (	Eas	ting	)
	3	1	0	9	0	4	

Y C	oor	dina	ates	(N	orth	ning)
4	7	3	9	9	5	3

- 2. What is the nature of this construction project?
  - New Construction
  - Redevelopment with increase in impervious area
  - O Redevelopment with no increase in impervious area

3. Select the predominant land use for both part of the select only one choice for EACH	pre and post development conditions.
Pre-Development Existing Land Use	Post-Development Future Land Use
○ FOREST	● SINGLE FAMILY HOME Number of Lots
O PASTURE/OPEN LAND	O SINGLE FAMILY SUBDIVISION
○ CULTIVATED LAND	O TOWN HOME RESIDENTIAL
● SINGLE FAMILY HOME	O MULTIFAMILY RESIDENTIAL
O SINGLE FAMILY SUBDIVISION	O INSTITUTIONAL/SCHOOL
O TOWN HOME RESIDENTIAL	○ INDUSTRIAL
O MULTIFAMILY RESIDENTIAL	○ COMMERCIAL
○ INSTITUTIONAL/SCHOOL	○ MUNICIPAL
○ INDUSTRIAL	○ ROAD/HIGHWAY
○ COMMERCIAL	O RECREATIONAL/SPORTS FIELD
○ ROAD/HIGHWAY	○ BIKE PATH/TRAIL
O RECREATIONAL/SPORTS FIELD	○ LINEAR UTILITY (water, sewer, gas, etc.)
○ BIKE PATH/TRAIL	○ PARKING LOT
○ LINEAR UTILITY	O CLEARING/GRADING ONLY
O PARKING LOT	O DEMOLITION, NO REDEVELOPMENT
OTHER	O WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
*Note: for gas well drilling, non-high volume	OTHER  hydraulic fractured wells only
	al area to be disturbed; for redevelopment a constructed within the
5. Do you plan to disturb more than 5 acres of	f soil at any one time? O Yes O No
6. Indicate the percentage of each Hydrologic  A B 75%	Soil Group(HSG) at the site.  C D 8
7. Is this a phased project?	○ Yes ● No
8. Enter the planned start and end dates of the disturbance activities.	te   End Date

9. I	den			ıe	nea	are	esi	t s	ur	fac	e w	at	erk	ood	у(	ies	) -	to	wh	ict	ı c	ons	str	uc	ti	on	S	it	e r	un	off	W	ill	
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15.	Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?	No O Un	known
16.	What is the name of the municipality/entity that owns the separate system?	storm se	wer
17.	Does any runoff from the site enter a sewer classified as a Combined Sewer?	No O Uni	known
18.	Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?	O Yes	• No
19.	Is this property owned by a state authority, state agency, federal government or local government?	O Yes	● No
20.	Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.)	○ Yes	• No
21.	Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?	• Yes	○ No
22.	Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)?  If No, skip questions 23 and 27-39.	O Yes	• No
23.	Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual?	O Yes	O No

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)
O Soil and Water Conservation District (SWCD)
O Registered Landscape Architect (R.L.A)
O Certified Professional in Erosion and Sediment Control (CPESC)
Owner/Operator
Other
SWPPP Preparer
V E N E Z I A A N D A S S O C I A T E S
Contact Name (Last, Space, First)
JOYCE ERIN
Mailing Address
5 1 2 0 L A U R A L A N E
City
C A N A N D A I G U A
State Zip
N Y 1 4 4 2 4 -
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### SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name E R I N	V
Last Name JOYCE	
Signature	Date 1 2 / 1 0 / 2 0 1 9

25.	Has a construction sequence schedule for practices been prepared?	the planned management  • Yes O No
26.	Select <b>all</b> of the erosion and sediment comployed on the project site:	ontrol practices that will be
	Temporary Structural	Vegetative Measures
	● Check Dams	O Brush Matting
	$\bigcirc$ Construction Road Stabilization	O Dune Stabilization
	● Dust Control	Grassed Waterway
	○ Earth Dike	O Mulching
	■ Level Spreader	Protecting Vegetation
	O Perimeter Dike/Swale	O Recreation Area Improvement
	O Pipe Slope Drain	Seeding
	O Portable Sediment Tank	○ Sodding
	O Rock Dam	○ Straw/Hay Bale Dike
	Sediment Basin	O Streambank Protection
	○ Sediment Traps	● Temporary Swale
	Silt Fence	$\bigcirc$ Topsoiling
	Stabilized Construction Entrance	○ Vegetating Waterways
	Storm Drain Inlet Protection	Permanent Structural
	○ Straw/Hay Bale Dike	· ·
	O Temporary Access Waterway Crossing	O Debris Basin
	$\bigcirc$ Temporary Stormdrain Diversion	Obiversion
	○ Temporary Swale	O Grade Stabilization Structure
	O Turbidity Curtain	● Land Grading
	○ Water bars	○ Lined Waterway (Rock)
		O Paved Channel (Concrete)
	Biotechnical	O Paved Flume
	O Brush Matting	<pre>Retaining Wall</pre>
	○ Wattling	O Riprap Slope Protection
		O Rock Outlet Protection

<u>C</u>	the	er										) <b>5</b>	CIE	ean	ша	пĸ	PI	.01	ec	CIC	)11				

O Streambank Protection

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required

if response to Question 22 is No.

- 27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.
  - O Preservation of Undisturbed Areas
  - O Preservation of Buffers
  - O Reduction of Clearing and Grading
  - O Locating Development in Less Sensitive Areas
  - O Roadway Reduction
  - O Sidewalk Reduction
  - O Driveway Reduction
  - O Cul-de-sac Reduction
  - O Building Footprint Reduction
  - O Parking Reduction
- 27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).
  - $\bigcirc$  All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
  - O Compacted areas were considered as impervious cover when calculating the  $\mathbf{WQv}$  Required, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.
- 28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required
acre-feet

29. Identify the RR techniques (Area Reduction), RR techniques (Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to  $\frac{\text{reduce}}{\text{the Total WQv Required($\#28)}}$ .

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

<u>Note:</u> Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

## Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

		ontributing					ibuti	
RR Techniques (Area Reduction)	Area	(acres)	Im	pervi	ous	Ar	ea (ac	re
O Conservation of Natural Areas (RR-1) .			and/or					
O Sheetflow to Riparian Buffers/Filters Strips (RR-2)		•	and/or			•		
○ Tree Planting/Tree Pit (RR-3)		-	and/or			•		
O Disconnection of Rooftop Runoff (RR-4)	••-	•	and/or			• _		
RR Techniques (Volume Reduction)					T		T	
○ Vegetated Swale (RR-5) ······			• • • • • •		+-	-		$\dashv$
○ Rain Garden (RR-6) ·····						•		$\dashv$
○ Stormwater Planter (RR-7)					1	•	++	_
○ Rain Barrel/Cistern (RR-8)						• _	$\perp \perp$	
O Porous Pavement (RR-9)								
○ Green Roof (RR-10)						•		
Standard SMPs with RRv Capacity								$\neg$
○ Infiltration Trench (I-1) ······						•		-
O Infiltration Basin (I-2) ·····					<u> </u>	•		4
O Dry Well (I-3)					Ш.	•		
O Underground Infiltration System (I-4)					Ц.			
○ Bioretention (F-5)					Ц.			
○ Dry Swale (0-1) · · · · · · · · · · · · · · · · · · ·								
Standard SMPs						_		_
O Micropool Extended Detention (P-1)					Щ.	_		_
○ Wet Pond (P-2)					Щ.			
○ Wet Extended Detention (P-3) ······					╽.			
O Multiple Pond System (P-4) ·····								
O Pocket Pond (P-5) ·····								
○ Surface Sand Filter (F-1) · · · · · · · · · · · · · · · · · · ·								
O Underground Sand Filter (F-2) ·····								
O Perimeter Sand Filter (F-3) · · · · · · · · · · · · · · · · · · ·						i i		
Organic Filter (F-4)								
Shallow Wetland (W-1)								
O Extended Detention Wetland (W-2)								
O Pond/Wetland System (W-3)								
O Pocket Wetland (W-4)								
○ Wet Swale (0-2)					7.			1

	Table 2 - Alternative SMPs (DO NOT INCLUDE PRACT USED FOR PRETREATMENT	
Alt	cernative SMP	<u>Total Contributing</u> Impervious Area(acres)
		Impervious insulates)
0	Hydrodynamic	
0	Wet Vault	•••••
	Media Filter	
0	Other	
	ide the name and manufacturer of the Alternative SM	MPs (i.e.
prop	rietary practice(s)) being used for WQv treatment.	
	nufacturer	
Note:	: Redevelopment projects which do not use RR techniques use questions 28, 29, 33 and 33a to provide SMPs	
	WQv required and total WQv provided for the project	ct.
30.	Indicate the Total RRv provided by the RR techniq Standard SMPs with RRv capacity identified in que	
	Total RRv provided  acre-feet	
31.	Is the Total RRv provided (#30) greater than or educated WQv required (#28).  If Yes, go to question 36.  If No, go to question 32.	qual to the
32.	Provide the Minimum RRv required based on HSG. [Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Ai)	Aic)]
	Minimum RRv Required acre-feet	
32a.	Is the Total RRv provided (#30) greater than or ed Minimum RRv Required (#32)?	qual to the OYes ONo
	If Yes, go to question 33.  Note: Use the space provided in question #39 to specific site limitations and justification for 100% of WQv required (#28). A detailed evaluat specific site limitations and justification for 100% of the WQv required (#28) must also be incompressed. SWPPP preparer must modify design to me criteria.	r not reducing tion of the r not reducing cluded in the an not be

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total  $\underline{\text{impervious}}$  area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a.	Indicate the Total WQv provided (i.e. Widentified in question #33 and Standard in question 29.	
	WQv Provided acre-feet	
<u>Note</u> :	For the standard SMPs with RRv capacity = the WQv calculated using the contribu - RRv provided by the practice. (See T	ting drainage area to the practice
34.	Provide the sum of the Total RRv provide the WQv provided (#33a).	ed (#30) and
35.	Is the sum of the RRv provided (#30) and (#33a) greater than or equal to the total	
	If Yes, go to question 36.  If No, sizing criteria has not been met, processed. SWPPP preparer must modify decriteria.	
36.	Provide the total Channel Protection Stoprovided or select waiver (36a), if appl	
	CPv Required	CPv Provided acre-feet
11,559 (100)		
36a. '	The need to provide channel protection has O Site discharges directly to tidal or a fifth order or larger stream.	waters
	O Reduction of the total CPv is achi through runoff reduction technique	
37.	Provide the Overbank Flood (Qp) and Extr select waiver (37a), if applicable.	eme Flood (Qf) control criteria or
	Total Overbank Flood Co	ntrol Criteria (Qp)
	Pre-Development	Post-development
	CFS	CFS
	Total Extreme Flood Con	trol Criteria (Qf)
	Pre-Development	Post-development

CFS

CFS

8.				pera																v	) No	
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40.	Identify other DEC permits, existing and new, that are required for this project/facility.
	○ Air Pollution Control
	○ Coastal Erosion
	○ Hazardous Waste
	○ Long Island Wells
	○ Mined Land Reclamation
	○ Solid Waste
	O Navigable Waters Protection / Article 15
	○ Water Quality Certificate
	○ Dam Safety
	○ Water Supply
	○ Freshwater Wetlands/Article 24
	O Tidal Wetlands
	○ Wild, Scenic and Recreational Rivers
	O Stream Bed or Bank Protection / Article 15
	O Endangered or Threatened Species(Incidental Take Permit)
	○ Individual SPDES
	O SPDES Multi-Sector GP N Y R
	O Other
	● None
41.	Does this project require a US Army Corps of Engineers Wetland Permit?  If Yes, Indicate Size of Impact.  O Yes  No
42.	Is this project subject to the requirements of a regulated, traditional land use control MS4? • Yes O No (If No, skip question 43)
43.	Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI?
44.	If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. $NYR$

Print First Name

### Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

2/12/2019

Daniel	K
Print Last Name	
Wegman	
Owner/Operator Signature	
Doniel & Wegman	1

# STORMWATER MANAGEMENT SYSTEMS OPERATIONS AND MAINTENANCE PLANS



### Stormwater System Operations and Maintenance Plan

Project:

Wegman Residence

Tennis Court and associated driveway and new landscape improvements

Location:

4885 County Road 16

Canandaigua, NY

Client:

Daniel R. Wegman

Date:

December 10, 2019

Prepared by:

Venezia and Associates

5120 Laura Lane

Canandaigua, NY 14424

(585) 396-3267

### Contents

Part I:

**Stormwater System Components** 

1. Closed Drainage System

2. Water Quality SMPs

Part II:

Construction of the System

Part III:

**Maintenance of System during Construction** 

Part IV:

Maintenance of the System Post-Construction

Part V:

Repair of the System

Part VI:

Reporting

### Part I: Stormwater System Components

The on-site stormwater management system, consisting of area drains, drainage swales, rain gardens and an underground infiltration system, collects runoff from the driveway, tennis court and landscape. Stormwater collected from these surfaces is treated and mitigated using Stormwater Management Practices (SMPs) prior to discharging downstream to Canandaigua Lake.

### Part II: Construction of the System

Sediment and erosion control during construction will prevent possible damage to the proposed drainage system and downstream facilities. The Contractor shall conform to the guidelines established by the project's Stormwater Pollution Prevention Plan (SWPPP), which include the following control measures:

- 1. Keep land disturbance to a minimum. Plan the phases of development so that only the areas actively being developed are exposed. All other areas should have natural vegetation preserved, have good temporary cover, or permanent vegetation established.
- 2. Stabilize disturbed areas. Permanent structures, temporary or permanent vegetation, and mulch should be employed as quickly as possible after land is disturbed.
- 3. Protect disturbed areas from stormwater runoff. Install erosion control or stormwater management measures to prevent water from entering and running over disturbed areas, and to prevent erosion damage to downstream facilities.
- 4. Install perimeter control practices. Use practices that isolate the development site from surrounding areas. Siltation fence and a temporary settlement basin shall be utilized.
- 5. Contractor shall clean/flush entire stormwater system prior to final acceptance of owner.

During construction, all water quality SMPs shall be protected and maintained as described in Part III below.

Part III: Maintenance of the System during Construction

Maintenance Schedule during Construction

	Inspection Frequency and Procedures	Maintenance Thresholds	Maintenance Action
Sweeping (driveway, walkway, tennis court)	Weekly or on an as needed basis  • Check sediment/grit accumulation	If sediment/grit builds up on driveways, walkways, and parking areas	Sweep area with mechanical sweeper or hand sweep area.
Area Drains	Weekly and after storm events greater than or equal to $\frac{1}{2}$ inch of rainfall over a 24-hour period	If the bottom of the basin appears to be collecting sediment	Clean sediment out

After the site has been fully stabilized all erosion control measures shall be removed.

All sediment removed from SMPs shall be disposed of legally by the Contractor.

During Construction the site shall meet NYSDEC and Canandaigua Stormwater and Erosion Control Standards.

Part IV: Maintenance of the System Post-Construction

	Inspection Frequency and Procedures	Maintenance Thresholds	Maintenance Action
Area Drains	Quarterly and after storm events greater than or equal to 2 inches of rainfall over 24-hours:	If the bottom of the basin appears to be collecting sediment	Clean sediment out
Rain Garden	Inspect and remove trash monthly. Mow 2-12 times annually. Annually inspect for dead vegetation and mulch.	If needed.	Remove trash when required. Mow. Replace dead vegetation and prune as required. Mulch Annually
Underground Infiltration Area (below Tennis Court and below Raingarden)	Conduct semi-annual and after large storm events (more than 3.2-inches of rainfall in a 24-hour period) inspections.	If sediment is observed in the area drains connecting to infiltration area or in Rain Garden Basin.	Remove sediment by jetting pipe system
Dry Swales	Inspect and remove trash monthly. Mow 2-12 times annually. Annually inspect for dead vegetation and mulch.	If needed.	Remove trash when required. Mow. Replace dead vegetation and prune as required. Mulch Annually.

All sediment removed from SMPs shall be disposed of legally and in accordance with state and local requirements, by the Owner.

### Part V: Repair of the System

The drainage system shall be maintained by the owner. The repair of any component of the system shall be made as soon as possible to prevent any potential pollutants including silt from entering downstream receiving bodies.

### Part VI: Reporting

The Owner shall maintain a record of drainage system inspections and maintenance. The records shall be made available to the Town of Canandaigua and Town Engineer, as they are generated. Attached is a prototype of an inspection/maintenance log to be used.

## STORMWATER MANAGEMENT SYSTEM OPERATIONS AND MAINTENANCE LOG

Wegman Residence 4885 West Lake Road, Canandai		ected by:
	Status	Action Taken

## SEDIMENT AND EROSION CONTROL SPECIFICATION



## CONSTRUCTION SPECIFICATIONS SEDIMENTATION AND EROSION CONTROL

### PART 1 - GENERAL

#### 1.1 DESCRIPTION OF WORK

- A. <u>Work Included:</u> Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
  - 1. The work of the Section consists of all sedimentation and erosion control as indicated on the Contract Drawings and/or specified herein and includes but is not limited to the following:
    - Silt fence.
    - b. Hay bale barriers.
    - c. Temporary covers for drainage structures.
    - d. Temporary protective soil coverings.
  - 2. The Contract Drawings indicate the minimum requirements for sedimentation control. The Contractor shall install all measures needed to control sediment and erosion as required by the Contractor and Sub-contractor's construction methods and operations, the weather conditions, and as directed by the Engineer.

### 1.2 SUBMITTALS

- 1. The Contractor shall provide the following samples and/or submittals for approval. Do not order materials until approval of samples, certifications or test results has been obtained. Delivered materials shall closely match the approved samples.
  - a. Siltation Fence: Submit manufacturer's literature, material specification, and installation instructions.
  - b. Mulch Material: Submit one cubic foot sample(s).
  - c. Mesh or Blanket Matting: submit one square foot sample(s) and manufacturer's literature, material specification, and installation instructions.
- 2. The Contractor shall install and maintain sedimentation control devices during construction to prevent the movement of sediment from the construction site to off site areas, into adjacent water bodies via surface runoff or into underground drainage systems. Measures to prevent the movement of sediment off site shall be installed, maintained, removed, and cleaned up at no additional cost to the Owner.

### 1.3 REFERENCE STANDARDS

- A. The following standards are applicable to the work of this Section to the extent referenced herein:
  - 1. "New York Standards and Specifications for Erosion and Sediment Controls (November 2016)", prepared by the New York State Department of Environmental Conservation.
  - 2. "New York State Stormwater Management Design Manual (August 2015)", prepared by the New York State Department of Environmental Conservation.

### 1.4 EXAMINATION OF SITE AND DOCUMENTS

- A. It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of a lack of knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation of the site.
- B. Plans, surveys, measurements and dimensions under which the work is to be performed are believed to be correct, but the Contractor shall have examined them for himself during the bidding period and formed his own conclusions as to the full requirements of the work involved.

### 1.5 PERMITS, CODES AND REGULATION

- A. Comply with all rules, regulations, laws and ordinances of the Town and State, and all other authorities having jurisdiction over the project site. All labor, materials, equipment and services necessary to make the work comply with such requirements shall be provided by the Contractor without additional cost to the Owner.
- B. Comply with all applicable regulations of the New York State Department of Environmental Conservation (DEC) and the United State Environmental Protection Agency (EPA).

#### 1.6 STORM WATER POLLUTION PREVENTION PLAN

- A. A professional engineer has prepared a Storm Water Pollution Prevention Plan (SWPPP). The Contractor shall locate the SWPPP and review its contents thoroughly. Upon the award of the Contract, the Contractor becomes responsible for implementing the SWPPP and meeting the requirements and standards detailed within the SWPPP. The Contractor is also responsible for all record keeping associated with maintaining the SWPPP and for maintaining in good operating condition all SWPPP controls. The Professional Engineer who prepared the SWPPP shall modify the SWPPP as necessary to reflect changes in project scope, schedule, or approach, as coordinated with the Contractor. All labor, materials, equipment and services necessary to make the work comply with such requirements shall be provided by the Contractor without additional cost to the Owner.
- B. The Contractor shall fill out all pertinent information within the SWPPP.
- C. The Contractor shall locate the New York State DEC Division of Water "Notice of Intent" for Storm Water Discharges Associated with CONSTRUCTION ACTIVITY under State Pollutant Discharge Elimination System (SPDES) General Permit #GP-0-15-002 (NOI) form in the SWPPP.
- D. The Contractor is responsible for filling in the Contractor and Sub-Contractor information in the areas indicated within the SWPPP and for completing the Contractor's Certification portion of the SWPPP.
- E. The Contractor is responsible for maintaining the following records on site:
  - 1. Completed SWPPP as indicated in sections B, C, D and E.
  - 2. Completed Inspection Reports
  - 3. Completed Maintenance Reports
  - 4. Construction Activity Reports
  - 5. Spill Records
  - 6. Other Materials relevant to the NOI Permit and SWPPP
  - 7. A copy of the Notice of Termination
- F. The Contractor is responsible for filing a Notice of Termination once the project has been completed and is permanently stabilized. Stabilization is complete when all temporary storm water and erosion controls have been removed, all permanent storm water and erosion controls are in place and functional and all vegetated areas are at least 80% viable.
- G. All labor, materials, equipment and services necessary to make the work comply with the above

requirements shall be provided by the Contractor without additional cost to the Owner."

### PART 2 - PRODUCTS

#### 2.1 SILTATION FENCE

- A. Siltation fence shall consist of the following elements:
  - 1. Fabric for siltation fence shall be a minimum width of 3 feet and conforming to the following criteria:

#### MINIMUM ACCEPTABLE

Fabric Properties	<u>Value</u>	Test Method
Grab Tensile Strength (lbs)	124	ASTM D 4632
Elongation of Failure (%)	15	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (1bs)	65	ASTM D 4833
Flow Rate (gal/min/sf)	10	ASTM D 4491
Apparent Opening Size (sieve)	30	ASTM D 4751
Ultraviolet Radiation (% strength retained)	70	ASTM D 4355

- 2. Use only commercially available fabric that is certified in writing by the manufacturer for the purpose intended.
- 3. Acceptable fabric materials include "Mirafi Envirofence" by TC Mirafi, "Style 2130" by Amoco Fabrics Co., and "FX-55" by Carthage Mills, or approved equal by the Engineer.
- 4. Silt fence posts: Posts may be wood or metal. Wood post shall be a minimum 1½ inch by 1½ inch by 5 feet long hardwood stakes commonly used to support siltation fabric. Metal posts shall be a minimum of 1 inch wide and 5 feet long. Posts shall be spaced at a maximum distance of 8 feet on center.
- 5. Provide suitable heavy nylon cord for securing abutting silt fence posts.

### 2.2 HAY BALES

- A. Hay bales shall be of wire or nylon bound bales of hay.
- B. Stakes for bales shall be one of the following materials. Lengths shall be approximately three feet (3').
  - 1. Wood stakes of sound hardwood, one inch by one inch (1" x 1") in size.
  - 2. Steel reinforcing bars of at least No. 4 size.

### 2.3 TEMPORARY COVERS FOR DRAINAGE STRUCTURES

- A. Filter fabric for use as temporary covers for drainage structures shall be the same as noted above for siltation fence.
- B. Wire mesh for use at temporary drainage structure covers shall be 6" x 6", W2.9 welded wire mesh.
- C. Silt-Sac, or approved equal, may be used in lieu of hay bales and filter fabric at catch basins.

### 2.4 TEMPORARY PROTECTIVE COVERINGS

- A. During establishment of vegetative covers, provide temporary protective coverings on ground areas subject to erosion of one of the following protective measures, as directed by the Engineer:
  - Mulch Materials

Rate of Application per 1000 sq.ft.

a. Hay or straw

90 lbs.

- 2. Mesh or Blanket Matting: Matting for erosion control on seeded or hydroseeded slopes, on planted surfaces, drainage swales, and on temporary or permanent slopes shall be:
  - a. Biodegradable straw, excelsior wood, or coconut fiber and photodegradable netting sewn together with cotton thread.
  - b. A flexible three-dimensional web of bonded polypropylene or PVC monofiliments.
  - c. Heavy jute mesh shall be of a uniform open plain weave of unbleached singe jute yarn.
  - d. Use only commercially available blanket mattings that are designed specifically for the intended use and certified in writing by the manufacturer for the purpose intended.
  - e. Erosion control matting shall be "Soil Saver" manufactured by Jim Walls Co., Dallas, TX; "Heavy Duty Jute Mesh" manufactured by Lewis International Corp., Springfield, NJ or approved equal.

### PART 3 - EXECUTION

### 3.1 GENERAL REQUIREMENTS

- A. The Contractor shall provide suitable and adequate means of sedimentation and erosion control during construction. Control measures shall prevent all erosion, siltation and sedimentation of waterways, drainage systems, construction areas, adjacent areas and off-site areas. Work shall be accomplished on and/or adjacent to the following work areas:
  - 1. Earthwork stockpiles and on-site storage and staging areas.
  - 2. Cut and fill slopes and other stripped and exposed graded areas.
  - 3. Constructed and existing swales and ditches.
  - 4. Unestablished lawns and seeded embankments.
- B. Means of protection as noted on the Contract Drawings indicate the minimum provisions necessary. Additional means of protection shall be provided by the Contractor as required for continued or unforeseen erosion problems, at no additional expense to the Owner.
- C. Periodic maintenance of all sediment control installations shall be provided to ensure intended purposes are accomplished. Sediment control measures shall be in working condition at the end of each day.
- D. After any significant rainfall, sediment control devices shall be inspected for integrity. Any damaged device shall be corrected immediately.
- E. The Contractor shall provide adequate means of control of runoff, as to not detrimentally impact downstream conditions during construction. The Contractor shall plan his operations so that

permanent drainage mitigation systems such as detention/retention/infiltration basins and chambers are in place and properly functioning prior to connecting upland drainage flows to these systems. The Contractor shall plan his operations such that downstream drainage mitigation measures are in place and functioning before attempting to tie in upgradient drainage systems.

- F. In the event that the Contractor is unable to sequence the work so that construction of the permanent drainage mitigation systems precedes the upland work, then the Contractor shall submit a plan indicating his proposed methods of otherwise controlling runoff from the site.
- G. The "New York Standards and Specifications for Erosion and Sediment Controls (August 2005)", should be consulted as a guide for the selection and installation of Best Management Practices to suit the conditions encountered.

### 3.2 SILTATION FENCE

- A. Install silt fence, well-staked at maximum eight-foot intervals in locations as shown on Contract Drawings and as directed. Staking shall occur on the disturbed area side.
- B. Secure fabric to posts on upstream side and bury fabric end within a 6-inch wide by 6-inch deep cutin trench. Wrap the fabric bottom around the inside of the trench and backfill excavated soil into the fabric pocket to anchor the fence fabric.
- C. Inspect siltation fence after major storm events and periodically and remove accumulated sediment and debris. If a breach or failure of the siltation fence occurs, the fence shall immediately be restored.

### 3.3 HAY BALE BARRIERS

- A. Install hay in location as shown on Contract Drawings and as directed.
  - 1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.
  - 2. Each bale shall be embedded in the soil a minimum of four inches (4").
  - 3. Bales shall be securely anchored in place by stakes or re-bars driven through the bales and a minimum eighteen inches (18") into the soil. The first stake in each bale shall be angled toward the previously laid bale to force bales together.
- B. Inspection shall be frequent and repair or replacement shall be made as needed.
- C. Bales shall be removed when they have served their usefulness so as not to block or impede stormwater flows or drainage.

### 3.4 TEMPORARY COVERS FOR DRAINAGE STRUCTURES

- A. Install temporary covers at drainage structure locations that may be subject to erosion infiltration and as directed by the Engineer.
- B. Inspect drainage structures periodically. Remove sediment accumulation and regrade or replace materials as required.

### 3.5 TEMPORARY PROTECTIVE COVERINGS

A. Place temporary soil coverings to control erosion and sedimentation on all disturbed or graded areas as required by the construction methods employed and as directed by the Engineer. Erosion control matting shall be installed in all areas seeded or hydroseeded with slopes of one vertical foot to three

foot horizontal, or steeper, immediately after such areas have been seeded and a hay mulch applied as follows:

- 1. The area to receive matting shall have been recently seeded and shall have a smooth surface free front stones, clods or depressions.
- 2. Roll out of the matting perpendicular to the slope, do not stretch the fabric. In drainage swales, center the fabric along the flow line. Install the matting in a check slot at the top and bottom of the slope and at the edges of the area to be covered. Check slots shall be six inches deep and six inches wide. Fabric shall extend down one wall of the check slot and across the full width of the base. Overlap edges of matting rolls four (4) inches minimum and overlap the ends eighteen (18) inches minimum.
- 3. Install staples in check slots, edges, center and ends of rolls by driving specified steel staples two feet on center over the entire area to be covered except at check slots and ends of rolls, where staples shall be placed six inches on center. All staples shall be driven below finished grade.
- 4. Fill check slots with loam and tamp firmly.
- 5. Reseed check slots and all disturbed areas per Specifications.
- 6. Following matting installation, roll the entire area with a smooth drum roller weighing between fifty and seventy-five (50-75) pounds per linear foot of roller. The finished installation of matting shall be firmly in contact with the seeded area and provide a smooth, finished appearance free from lumps or depressions.
- B. Install erosion control matting as a temporary ground cover in all disturbed or graded areas subject to erosion and as directed by the Engineer. The temporary ground cover shall protect the site from erosion until a full permanent lawn can be installed. Install and anchor in place temporary erosion control matting in accordance with manufacturer's printed instructions or as directed by the Engineer and remove all temporary erosion control matting prior to installation of a permanent lawn.
- C. Inspect protective coverings periodically and reset or replace materials as required.
- 3.6 REMOVAL AND FINAL CLEANUP
- A. Once the site has been fully stabilized against erosion, and with the approval of the Owner's Representative remove sediment control devices and all accumulated silt. Dispose of silt and waste materials offsite. Regrade all areas disturbed during this process and stabilize against erosion with surfacing materials as indicated.

**END OF SPECIFICATION**